

Bringing challenging agendas into EU policy advisory mechanisms to accelerate societal transitions

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TIMEFRAME Fellowship meetings with Associates took place over March to May 2020

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This Energy-SHIFTS Policy Fellowship report is part of a wider collection published in November 2020 describing dialogue between 21 energy policyworkers and [86] social scientists and humanities scholars, available via energy-shifts.eu.

Policy context

Adel El Gammal has been the Secretary General at the European Energy Research Alliance (EERA) since 2016. A non-profit association bringing together the European energy research community, EERA coordinates research activities across about 250 universities and public research centres across 30 countries. EERA's Joint Research Programmes cover the whole range of low-carbon energy technologies as well as systemic and cross-cutting topics, such as Energy System Integration, digitalisation and the economic, environmental and social aspects of the energy transition. EERA is currently preparing for the next Research and Innovation Framework Programme - Horizon Europe¹ - and has recently released a White Paper on the Clean Energy Transition, providing a conceptual framework allowing for a systemic approach towards the Energy Transition. This includes adopting a more holistic, trans-disciplinary and cross-sectoral approach that covers the wide scope of systemic, societal, and technological transformations needed.

The revised EERA mission of “*catalysing European energy research for a climate-neutral society by 2050*” recognises the role of ‘system thinking’ in addressing the global challenge of climate change. This is therefore now fully embedded into EERA's core strategy as well as in its advisory activities towards the EU institutions.

EERA research institutes are at the frontline of policy advising through their active participation in the Strategic Energy Technology Plan (SET-Plan) and though the identification of research and innovation challenges to potentially become Horizon Europe priorities for the upcoming EU budgetary period 2021-2027. EERA is currently also providing dedicated scientific advice on how to best support the Clean Energy Transition (CET) through the dedicated Partnership currently being prepared as part of Horizon Europe.

More specifically, Adel has been a long-time advocate of the crucial need to understand and address non-technological dimensions allowing for the profound societal transformation required to achieve the CET, and hence the crucial importance of integrating the Social Sciences and Humanities (SSH) in the transition definition process. Given EERA's wide ranging remit, he intended to utilise the Fellowship to expand and probe his own understanding of a variety of SSH-related themes, which might challenge and transform current policy directions.

These themes included firstly acquiring a better understanding of the central role of citizens in the energy transition and of the latest policy tools available to influence their behaviours and lifestyle. Related policymaking must be inclusive, effective and especially timely considering the very short time window available to act on climate change.

Secondly, he was keen to better understand the limitations of market base instruments in fighting climate change and the range of non-market policy measures that could be envisioned and activated to that effect. The role of education on citizen's behaviours, social standards and lifestyle was also of central interest here.

Finally, an important question for Adel was exploring the limits to decoupling and what their consequences should be on policymaking. Acknowledging the finiteness of available resources, permanent growth is theoretically impossible unless full decoupling can be achieved. Circularity can only partially respond to this challenge, as it only can decrease but not halt the need for additional resources.

“Social innovation will have an enabling role in making the clean energy transition happen. I am looking forward to better understanding how behavioural sciences will help in designing and planning the most effective policy framework in Europe. This will contribute to the creation of the holistic knowledge necessary to bring forward research on pathways to climate neutrality, including new policies that will foster the behavioural changes needed to drive the profound societal transformation required to reach climate neutrality.”

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1 See: https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en.

Policy challenges

Given the policy context above, Adel prepared the following overarching SSH-related questions to prompt discussion with Associates:

- What are the policy relevant drivers (beyond price signals) that lead people to change their behaviour? How can these drivers be activated and at what speed?
- What is the role of education in the process of engaging citizens to adopt new lifestyles, and notably avoid the rebound effect?
- How can policy be designed using new instruments and indicators to measure growth that better capture social and environmental aspects (e.g. as compared to GDP)?

Underlying the above was a desire to explore how policy can help facilitate a transition process that is fair, inclusive and effective.



Matched Policy Associates

Given the policy challenges outlined above, the Energy-SHIFTS team sought Policy Associates to work with Adel with expertise in technology use-related behaviours and the interrelationship between attitudes, values and the shape of the energy system, with a view to inform on the main drivers of behavioural change in relation to the energy transition. Experts were also sought with a strong background in Economics in order to bring insights on alternative growth indicators, whilst also covering a range of different disciplines and geographic origins. The five matched Associates were:

Floor Alkemade - Professor of Economics and Governance of Technological Innovation, Department of Industrial Engineering and Innovation Sciences, Eindhoven University of Technology, the Netherlands. Floor received her PhD in Agent Based Evolutionary Economics and her key areas of expertise include innovation, cleantech (and related technology use behaviours) and sustainability. Increasingly her work has included a focus on the global south.

Ganna Gladkykh - Researcher, ERASME - Jean Monnet Center of Excellence on Sustainable Development, Clermont-Ferrand, France. Ganna has a PhD in Philosophy and specialises in sustainable energy research. She has passion for research projects and initiatives where academic rigour is combined with policy relevance.

Witold-Roger Poganietz - Head of Group, Socio-technical Energy Futures Research Group, Institute of Technology Assessment and Systems Analysis, Karlsruhe Institute of Technology, Germany. Witold-Roger holds a PhD in Economics but also has a background in History and Political Science. His research interests include interrelationships between attitudes, values and the shape of the energy system.

Johannes Reichl - Project Manager, Energy Institute, Johannes Kepler University, Linz, Austria. Johannes is an applied statistical researcher working across the fields of Energy and Resource Economics. His work involves developing advanced econometric methods while investigating (energy) challenges facing society, including a focus on social acceptance and local opposition issues.

Valeria Jana Schwanitz - Professor of Energy Economics, Western Norway University of Applied Sciences, Sogndal, Norway. Valeria focuses on data-driven analysis of energy and technology systems, integrated assessment of human-nature systems, and epistemology of integrated assessment modelling. Her recent projects include work on mapping citizen-led low carbon energy projects across Europe.

Discussion points and SSH insights

Adel had bilateral calls with each of his Policy Associates over March to May 2020. He also participated in an online workshop with other Fellows and Associates working on policy challenges under the 'Behaviours' thematic category at the end of May 2020. This section reflects the main discussions points during the Fellowship programme.

Energy transitions are in essence fundamental societal transitions that are systemic in nature

The key role of citizens in embracing the clean energy transition and the importance of the Social Sciences and Humanities (SSH) in understanding the corresponding drivers of such a transition was the common ground at the start of the discussions with Associates. These very largely confirmed and instructed the initial assessment of the challenges faced, and the essential role of understanding the clean energy transition as a profound societal transformation. This reconfirmed for Adel the importance of adopting a holistic and global approach to the clean energy transition: *"We are actually transitioning a whole society and therefore must adopt a systemic approach, understanding the interlinkages of different drivers and barriers influencing the speed and direction of the transition"*.

In addition, the absolute urgency in changing policy approaches and perceptions became very clear. *"The magnitude of change needed by 2050 appears increasingly incompatible with the actual speed of societal transformation we are currently witnessing, in Europe and globally. This reaffirmed my scepticism in our ability to meet Paris (or any non-disruptive) target at global level. In this respect, the learnings from the Covid-19 crisis should be taken into account in accelerating the process"* he continued.

The current Covid-19 pandemic crisis was in fact discussed as an example of a situation in which even very drastic measures, involving profound changes in lifestyle can be imposed by national governments and supported by citizens, on basis that the sense of urgency is clearly understood and acknowledged. The perception shared during the discussion highlighted how the sense of urgency on fighting climate change is still widely missing in the political discourse, making the case for more disruptive political initiatives and more ambitious regulations. The climate emergency is not yet acknowledged by the community and therefore easily opposed by both political parties and citizens. Another important learning comes from understanding the inertia of 'established order'. As an example, a few months of Covid-19 pandemic have generated an unprecedented switching from individual cars towards soft urban mobility, even within highly reluctant citizen's categories. This shift that may not be achieved over years under traditional policy measures.

Contradiction, complexity and possible complementarity of economic vs. societal ambitions

The reflections with the Associates implied that the likely contradiction between economic growth (hence material and energy flows and consumption) and zeroing emissions is a challenge that still requires substantial research efforts at the current stage. There is no evidence that total decoupling could ever be reached. Therefore, economic growth, as defined today, is very likely to be incompatible with emissions cuts and climate neutrality. This was recognised as a key issue that should be better understood and addressed by European strategic long-term policies such as the European Green Deal. One way forward could be the redefinition of 'growth' using indicators that are not correlated to energy or material flows and usage. This was recognised as a critical question, with in-depth answers requiring further analysis and additional expertise. Furthermore, across the discussions, reliance on pure market signals was seen as largely insufficient to drive a societal transformation forward.

“ Societal transformation goes far beyond the aspects that can be influenced with market mechanisms; it is notably also about values, lifestyle, and social standards. These aspects are very complex to address especially in a short timeframe – as they usually entail cycle times of a 'generation' and also given the high cultural diversity of Europe **”**,

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Associates also discussed how higher literacy of citizens in how their behaviour impacts emissions may be essential. Education is considered as key element to transform the fundamental perception and relationship citizens have to energy. Education was identified as often underused or even forgotten in the overall strategy to fight climate change.

Translations to policy

Following the Fellowship, Adel will be building on the insights generated in the following three ways:

1. **Sharing insights across EERA:** the main takeaways from the Fellowship will be widely shared and discussed within the EERA community by means of a range of internal communication channels, such as i) meetings and workshops involving all constituencies of the organisation, notably the Executive Committee members, the Coordinators of EERA Joint Programmes and the EERA secretariat (e.g. EERA Summer Strategy Meeting, Joint Programme Coordinators meetings, Policy Working Group, Strategy Task Force) and ii) EERA digital communication channels such as weekly briefing notes, articles and editorials in EERA newsletter, etc. The Fellowship was also a key input to the design of the EERA White Paper on the Clean Energy Transition. Adel's four main takeaways to share with colleagues were:
 - Recognising that the energy transition is a societal (rather than a technological only) transition that needs to be approached with a systemic, cross-sectoral and multi-disciplinary view.
 - A renewed awareness on the essential role of social sciences in energy policy since, in essence, transition involves changing consumption patterns. In addition, learnings from the Covid-19 pandemic hint to a huge misperception of the urgency to fight climate change.
 - The need to understand and explore diversity in perception across European citizens, considering geographic location, level of understanding/education, socio-economic situation and dominant values and beliefs. These are all important factors to be considered by policymakers in building narratives that citizens can relate and connect to with a view to increase their engagement in the transition process with the required depth and speed.
 - The need to further understand the constraints and limitations to 'decoupling' and 'circularity' and how they should impact the policy making process in the view of zeroing GHG emissions by 2050.
2. **Enhancing EERA advisory input:** EERA has recently revised its mission statement to align it to the EU objective of climate neutrality by 2050. In that respect, EERA intends to expand its research fields and its activities beyond technology research. In the first quarter 2020, EERA has constituted a core expert team reflecting on how to best address the CET as a whole and define most effective pathways to achieve climate neutrality. The inputs gathered from interactions with the Associates have significantly enhanced EERA understanding of the energy related policy making. Insights from the Fellowship were widely integrated in EERA White Paper on the Clean Energy Transition.
3. **Set up of future collaboration agreements:** on the basis of Fellowship conversations, Adel has already established a formal collaboration agreement with one of the Associates. She was integrated in the EERA core writing team of EERA White Paper on the Clean Energy Transition and discussion for a permanent structural collaboration are currently underway. Through the discussions with Associates, EERA was also invited to participate and/or take an advisory role in several H2020 proposals. Adel also looks forward to continuing collaboration with other Associates informally. In the future he would like to see more policy-researcher interaction as part of EERA's work, as is already the case with some of EERA's flagship initiatives such as the SUPEERA project, the EERA White paper on the Clean Energy Transition, and other advising opportunities on the preparation of the Horizon Europe Framework programme:

“Please multiply such initiatives and generalise as much as possible!”

Adel El Gammal

Learnings from Associates

Associates were asked to reflect on their virtual meeting with Adel, and what they learnt from them about on-the-ground energy policy challenges. Here we share some of their reflections, which show how meetings developed Associates' thinking on the role of research advice for policy.

*"[The online meeting gave me] confirmation of the necessity of considering energy behaviour, values and attitudes, but also the **challenges to include them into policy advice beyond the typical bla-bla-bla.**"*

*"[I learned the] that **views between researcher[s] and policymakers are more different than expected.**"*

*"[The meeting prompted me to] **puzzle on how to overcome the 'consultancy dilemma'**. On the one hand, scientists should be close to policymakers for providing science-based evidence to practical solutions. On the other hand, scientists need to investigate questions independently and without time pressure to ensure highest standards."*

*"The **decades long struggle to globally agree on effective climate policies may be rooted in the partial [neglect] of citizens' concerns and fears** about the effects strong climate policies might impose on their standard of living."*